

Professional Ethics

Programming Ethics

Dr. Ahmed Eltahawy

Programming Ethics

- ◆ Approve software only if they have a well-founded belief it is safe and meets specifications
- ◆ Programmers cannot assume that a system is ready to use only because it performs the tasks needed
- ◆ They should make sure these systems are also safe and meet every specification required by the user

Programming Ethics

- ◆ If programs are not safe, users are unprotected from hackers that could steal important information or money.
- ◆ Therefore, several tests should be performed in order to ensure a system's security before approving it.

Programmers should be?

Responsibility

- ◆ Accept full responsibility for their own work.
- ◆ If a program presents errors, the software developer should accept full responsibility for his or her work, and
- ◆ should work on revising, correcting, modifying, and testing it.

Programmers should be?

Permission

- ◆ Not knowingly use software that is obtained or retained either illegally or unethically.
- ◆ If a computer system will be used as a base for the creation of another, then permission to do so should be asked by the programmer.

Programmers should be?

Permission

- ◆ This principle prohibits using any other software for any purpose if the way it was gotten is not clear or is known to be illegal or unethical.

Programmers should be?

Work rules

- ◆ Identify, define, and address ethical, economic, cultural, legal and environmental issues related to work projects.
- ◆ If a programmer notices and identifies that working on a project will lead to any kind of problems, then
- ◆ the programmer should report it to his or her employer before continuing.

Programmers should be?

satisfy user requirements

- ◆ Ensure that specifications for software on which they work satisfy the users' requirements and they have the appropriate approvals.
- ◆ Software developers should come to their employers to ask for the correspondent approval to the system they are creating before continuing working on the next part.
- ◆ If it doesn't meet the requirements, then a modification to the source code of the system should be made.

Programmers should be?

Testing the software

- ◆ Ensure adequate testing, debugging and review of software.
- ◆ Programmers should perform the appropriate tests to the pieces of software they work with, and
- ◆ should check for errors and system security holes to make sure that the programs are well implemented.

Programmers should be?

Financial ethics

- ◆ Not engage in deceptive financial practices such as bribery, double billing, or other improper financial practices.
- ◆ Programmers are exposed to be participants on illegal activities to get money.
- ◆ They get involved in them due to threats, economical issues, or simply because they want to obtain easy money taking advantage of their knowledge about how computer systems work.
- ◆ This guideline prohibits programmer to form part of such unlawful actions.

Programmers should be?

Safe Software

- ◆ Improve their ability to create safe, reliable, and useful quality software.
- ◆ Since technology advances faster year by year, and so does virtual criminality, the need of well-structured and designed programs is increasing.

Programmers should be?

Safe Software

- ◆ Computer systems get old and limited by new ones and new devices.
- ◆ Programmers should “further their knowledge of developments in the analysis, specification, design, development, maintenance, and testing software and related documents in order to create better pieces of software.

References

- ◆ [https://en.wikipedia.org/wiki/](https://en.wikipedia.org/wiki/Programming_ethics)
Programming ethics